HUNZA CRAFTS

a *choga* is being washed, a man's greater strength is called into play—nine yards of wet homespun is no joke. He dips it likewise into cold water, lays it on a stone, and tramples it with his full weight. There is, of course, no fuel to spare for washing clothes or persons in hot water.

From our very first days in Hunza the mills had been a source of interest, and we constantly passed them and peeped in as we traced out all the water-channels on our walks. When the water was in flow (no stream, not even the Dála, was continuously in action in any one stretch) the mills were the centre of social gatherings. The miller and his family would be inside superintending operations, while the women with their babies and their work quietly awaited their turn. They had brought small sacks or bags of grain to be ground and would squat in and round the doorway happily gossiping. Occasionally a man would come along, bent double under a huge sack of 80 lb. or so.

We struck a particularly interesting group one day, where the water was plunging steeply down the hillside and turning three mills in succession, one below the other. David was photographing the busy crowd at the door, and I climbed up a little to join two old women busily spinning among the rocks above. "Father won't want to take pictures of us," they said, in a matter-of-fact tone quite free from bitterness, "we are old and wrinkled." As well as my halting speech permitted, I assured them that older people were our best friends, that we liked faces wrinkled like our own, and that if they would allow it, "Father" would much like their photographs. So I scrambled down the hill again to explain to DL where his next duty lay. He came and engaged the old dames in chat, but it was no easy matter to get a photograph for they were shy and self-conscious beyond the ordinary. The picture turned out at least recognizable, but when it came to delivering their copies we found that their houses were "quite near" of course, but down 500 or 600 feet of highly precipitous gorge, rather more of a rock-climbing feat than we were prepared to tackle in the course of an afternoon's walk. Enquiry revealed, however, that old Pfirúz's son was married to Ustád Nadíro's daughter, so

2: Lorimer T-3 (1920-4; 1934-8) 1939 AV7 Burusho AV7

we were able to leave the photo for her at No. 8. It was a constantly renewed pleasure to find how our photographs were welcomed and a constantly renewed surprise that these illiterate people, who had never seen a picture in their lives, were able at once to recognize and name the tiny reproductions of themselves. This was the one point in favour of my quarter-plate camera that it yielded larger prints than David's smaller ones. Only one woman in all our experience refused to take any interest in photographs, and that was, oddly enough, my special friend Bibi Gímo, of No. 1. "Take it away; I can't understand it," she would say to the others eagerly crowding round to see the latest of grandfather or baby Faqér. Quite possibly, unsuspected by herself, her eyesight was below par. But for the most part quite old people like the various grandfathers seemed as sharp-sighted as ever. On one occasion a man was studying a group of field-builders, the figures in which were very small, and he mis-identified himself: "Hullo, that's me all right, but *where* is my moustache?" He looked again more carefully, and found himself, moustache and all.

It was no negligible tax on our time to make spare prints for everyone, but we felt it was one small return we could make—without corrupting our friends—for the unstinted kindness we met on every hand.

We visited all the mills within range, studying them critically with future photographs in mind, for they were dark little hovels without smoke-holes, and lit only by the door and a small gap, representing one missing stone in the wall opposite, and we had to make elaborate calculations as to the aspect of doors and light-holes and sun and times of day to decide which offered the best hope of an interior photograph (we had unfortunately brought no flashlight apparatus with us).

When the water was not "on" we made an effort to master their complicatedly simple mechanism. The water is led from some height by a wooden shoot consisting of a hollowed-out log and falls on to the wings of a rude "wheel" below the floor. The central hub is a rough sphere or cylinder hacked out of a root or tree trunk in which the "wings," eight or ten of them, are obliquely set. The axis of this wheel passes up

2: Lorimer T-3 (1920-4; 1934-5) 1939 AV7 Burusho AV7

256 through a central hole in the lower mill-stone and engages in an iron socket in the centre of the upper stone which it turns. The other end of the axis is shod with a pointed stone which revolves in a horizontal log. The lower mill-stone is firmly embedded in the floor of the mill, but an ingenious lever arrangement, which can be adjusted by wedges of convenient stones, enables you slightly to raise or lower the log below and thus to graduate the fineness of the flour. From side to side of the little hut runs a horizontal pole, whose ends are built into the walls, and from this the hopper is slung by two of the usual forked pegs. The hopper itself is most frequently a length of solid tree trunk shaped and hollowed out. Levy Kalbi's mill, in other respects highly suitable because better lit than most, was struck off our list of desirables because it had a horrible, carpentered hopper of planed planks—incongruously modern for our taste, though a source of natural pride to its owner. The narrow opening at the base of the hopper lets the grain trickle into a little sloping tray to which a wooden clapper is attached, ingeniously balanced by a thong so as to tap-tap on the revolving stone and gently shake the grain down to its fate. Another hollowed log acts as trough to receive the flour as it whirls out from between the stones. When the trough is full the flour is scooped up in double handfuls into its owner's bag. Beside the hopper lies a small wooden trowel of standard size, and the miller's fee for grinding the contents of an 80-lb. sack is one trowelful of flour. Another indispensable adjunct of the mill is a doubled piece of woolly sheepskin, which serves to sweep up any straying grain or flour.

Having calculated as best we might the most propitious lighting and a day when the Dála was not flowing we betook ourselves to our chosen Double Mill a mile or two away on the boundary between Aliábád and Dorkhan, where the Dála divides to give us our Middle Channel. There is a picturesque Mesopotamia here, with the mill-race and the mill-escape on one side and the divided stream on the other, and a fine grouping of trees above and below the Double Mill. We were armed with tripods and DL with his bigger camera, for at best ex-

2: Lorimer T-3 (1929-4; 1934-5) 1939 AV7 Burusho AV7

256 posures would have to run into several minutes. For an hour and a half we crawled about the interior of the amusing little mill—the roof was not high enough for us to stand upright—trying points of view and focuses to suit, and then propping our tripods steady with stones for each lengthy exposure. Our faithful escort was immensely amused by our clumsy antics, recking nothing of our aching legs and backs, and we could overhear them answering questions of this sort from the occasional passers-by: "What are you hanging about here for? The mill's not working. There's no water to-day!" "Of course not; we're waiting for Father and Mother." "Where are they?" "Inside here." "What on earth are they doing?" "Taking photographs." "What *of*?" "Oh, the hoppers and the mill-stones." Shouts of laughter! Our eccentricities were a never-failing delight to the populace, and our retainers loved acting as showmen. When at last we crawled out, half crippled with stooping and covered with dust and flour, we were greeted by a large crowd, friendly and mystified, to whom we had to explain how much better we liked their mills than our own at home. This of course pleased them, and they perhaps had visions of our attaining fame—perchance even riches—by erecting Hunza water-mills on the Isis or the Cam.

7:Tobe C, T-3 (1959)1960 AV7 Burusho AV7
Hunza

CHAPTER 36

2000 Years of Bread!

256 ONE OF THE THINGS that I did want to witness with my own eyes was the feeding and operation of a flour mill in Hunza. Apart from all of the other important and interesting data that I had hoped to gather while in this part of the world, the operation of the wheat mill was one that to me had great portent. I wanted to see the wheat actually going into the mill and coming out as flour.

000 Bread is said to be the staff of life. Well, whether it is or not remains a moot question. But to me at least, bread is important. I always have been a big bread eater.

121 262 Now it was only during the past few years that by reading and learning I found out how useless or even harmful the pleasant white loaf that we know in America is and can be. Having a fair idea about the health record as it exists in America and knowing the kind of

7:Tobe C, T-3 (1959)1960 AV7 Burusho AV7
Hunza

bread we eat, I was greatly interested when I heard about the people of Hunza and then found out that they eat only bread that is made from whole grain.

Then, when the same books or facts brought to light that the people of Hunza knew few of the world's ills, my interest was aroused to almost a fever pitch. I wondered if there was any connection between the kind of bread that we ate and our health and the kind of bread they ate in Hunza and their health.

From my own observations I also learned that wheat was the most important crop in Hunza, with the exception of apricots. I have also tried to establish which was the first domesticated grain in the annals of human history and I have not been able to establish clearly whether it was wheat or millet. But wheat is more adaptable to the temperate zones, whereas millet leans more to the warmer climes and it is clearly established that wheat is preferred by the white races.

I soon learned that there was a flour mill that functioned regularly, located on the route that we took from the palace at Baltit to the old palace or old fort. So on one of my walks I made it a point to investigate thoroughly the location, the workings and the construction of this old mill.

On my way up when we stopped at Chalt I saw one of these mills in operation, but I did not actually see the grain being made into flour.

For a man who has spent most of his life in the country and on a farm, I feel embarrassed to admit that I had never seen a flour mill in operation before.

During the past quarter of a century, or even a longer period, milling has, generally speaking, come into the hands of large corporations and that is why, I assume, I got it into my head that milling was a complicated big-time operation that required a great investment

256 and the hiring of many employees. I've tried to analyze how I mentally reached these conclusions and eventually I saw the light. I knew that the grain had to be stored in huge elevators, then transported to the mill in carload quantities and from the railroad cars it was carried or blown into huge bins and then from there into hoppers that fed it into the rolling mill itself. Then the process of separating the bran, then the wheat germ and then the flour took place. The next process, I understood, was for the flour to be ground even more minutely and then bleached. After this had all been accomplished there were some government rules or regulations that compelled the mills to fortify or replace some of the important values that had been removed.

Now after you have read the above, can you blame me for getting the idea that milling was a costly and complicated process? Again, I must confess, even to the extent of being embarrassed, that I had to travel to Hunza to learn the truth about milling. Then perhaps I need not be ashamed of my ignorance because the problem of making bread from grains has been plaguing mankind for more than 6,000 years, during which time much blood has been shed, governments have been overthrown and billions of dollars in profits have been made. Yes, the whole story of human existence can be written and told in terms of man's staff of life—bread!

When we stop to realize that bread has been the mainstay of human diet for almost 6,000 years, we ought to bury our heads in shame to admit that our knowledge concerning this life-giving or life-destroying food is so meager and inadequate. Not one person in a thousand realizes, knows or understands, what is contained in the food upon which he leans heavily and of which he consumes large quantities, not only every

7:Tobe C,T-3 (1959)1960 AV7 Burusho AV7
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day but in most cases, at every meal. 256

It came as quite a surprise to me to learn that milling was one of the most simple operations that could be devised and that difficulties and complications only arose when we sought to deviate from the natural way of doing things.

So now at last I was there watching a Hunzan flour mill in action. In all probabilities the same milling process is followed in practically all countries of the world where flour is milled in a simple manner.

My first impression as I watched the flour pouring from between the revolving stones was, "How easy—how utterly simple! Why should anyone in the world be denied access to that vital health-giving food?" Any man can have his own pure whole wheat flour, from which he can have made his wholesome delicious whole wheat bread, by the simple means of putting a grain of wheat between two stones and rubbing the two stones together.

In this Hunzan flour mill, wheat is poured into a suspended hopper made of wood, but shaped like and about the same size as a grain sack and tapered to a narrow opening just above the millstones. Attached under the opening is a small trough, tilted slightly. This trough sits with its lower end over the hole in the stone. Then right there at the mouth of the trough a wooden stick is attached so that it will dangle at the mouth of the opening and as the mill rotates, this stick taps against the opening and causes the grain to drop out in regulated amounts. Thus, the flow of the wheat into the opening of the millstone is governed.

The millstone is rotated by direct drive from the water wheel. From the conduit up above, a stone is removed and the water is allowed to run down a spillway, which leads under the mill house and is made to [37.6]

256 splash against the water wheel or paddle. The force is [376] sufficient to make the millstone revolve at a tremendous pace. The water can be quickly shut off by just putting the missing stone back in place, diverting the water flow down the conduit.

The millstones are enclosed by a tray or bin about 5 or 6 inches high. As the ground wheat or flour is forced out between the stones, it slowly fills the bin. Then it is scooped up into goatskin bags, usually by a [262] woman who is looking after the mill. In this manner it is carried to the individual homes to be used in making the wholesome whole wheat Hunzan bread and chapatties.

There appeared to be no large scale or assembly line grinding. Each individual came in with a container of wheat to be ground.

[262] Barley and rye are also used for flour and occasionally, millet and buckwheat.

262 The earliest crop that can be ground into flour in [243] Hunza is barley. After the long winter, food supplies [527] are worn to the near starvation level and when the first barley is ready for harvest, people of Hunza have cause to celebrate and do so in their barley festival.

252 I soon learned why chapatties were used in prefer-262 ence to bread, not only in Hunza but all over Pakistan and India. A chapatty requires only flour and water, a bit of mixing and then rolling out and laying on a piece of metal that is laid over a fire. In a few minutes it can be turned and then it is ready for eating. Even though bread might taste better, it certainly would require a lot more preparation. Simplicity is the keynote!

251 From what I saw, very little flour is stored and probably the people of Hunza have long ago learned their lesson, that wheat ground into flour does not have long keeping qualities.

7:Tobe C, T-3 (1959)1960 AV7 Burusho AV7
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The Hunzans are conceded to have superior health to their neighbors. Nagir land is more shaded by mountains. (*Figure 1.*)

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A water powered stone mill used by the Hunzans for making flour. (*Figure 2.*)

[Facing p. 390]

[p. 390-A]

8:Clark N-5 (1948-1951) 1963
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[P.43-B]

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GRINDING of barley and wheat, above, is done by centuries-old technique.

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CHAPATTIES are the end product of the country's milling and baking.